Value Systems and Adaptation:
A Typology of North Korean Defectors*

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The total number of North Korean defectors living in South Korea topped 33,247 in 2019. Yet research finds that many are experiencing difficulties adapting to South Korean society. This study, based on a survey of 1,010 defectors, outlines a new typology of the value systems of North Korean defectors. Using a combination of factor and cluster analysis, we identify five major groups of North Korean defectors: (1) nation-oriented authoritarians, (2) community-oriented materialists, (3) family-oriented traditionalists, (4) conservative entrepreneurs, and (5) individualist conservatives. We show that value orientations are associated with distinctive political views and have demonstrable effects on adaptation and life satisfaction levels, with conservative entrepreneurs faring best. Although all groups adapt reasonably well to operating in a very different political and economic system and in their personal lives, defectors report significant problems at the social level, particularly in the form of discrimination. These findings suggest that more 'customized policy' be developed and implemented for North Korean defectors which ultimately helps them adjust more smoothly to South Korean society.

Keywords: North Korean defectors, value orientation, value segments, adaptation, life satisfaction

I. Introduction

Since the death of Kim Il Sung in 1994, who ruled North Korea for forty years, and natural disasters that desolated the country during 1994-95, North Korea has been dealing with political and economic turmoil within the country. Especially, the worst natural disasters during 1994-95 exacerbated food shortages and caused an unprecedented death toll by starvation.[1] Kim Jong Il, who succeeded Kim Il Sung, called the period the *'Arduous March,'* which is the same depiction of the time of difficulty endured during Japanese colonialism. A large number of North Korean people, with the collapse of the public distribution system (PDS), then crossed the border in search of food and a means of survival. At the same time, the Kim Dae Jung and Roh Moo Hyun administrations of South Korea embraced North Korean defectors under progressive initiatives toward the North with the 'Sunshine policy.' This opened the so-called era of mass influx of North Korean defectors to the South, more than 2,000 defectors per year since 2000.

Although the flow of North Korean defectors into the South has slowed under Kim Jong Un, the total number now living in the country reached 33,247 by September of 2019 (Korean Ministry of Unification, 2019). As the number of North Korean defectors has increased, so has awareness of the substantial challenges they face in adapting. Some of these problems can be traced to discrimination and caution on the part of South Koreans, but the problems are ultimately rooted in the difficulties of adjusting to life in a modern capitalist democracy. Among these challenges are material ones, such as a mismatch of skills, and psychological ones ranging from guilt and depression and even those that resemble post-traumatic stress syndrome. Approximately 8% of

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1. For detailed food crisis and economic hardship in the mid 1990s, see reports from World Food Programme(WFP), United Nations Development Programme(UNDP), and United Nations Office for the Coordination of Humanitarian Affairs(OCHA). <https://reliefweb.int/report/democratic-peoples-republic-korea/world-food-programme-north-korea-wfp-has-fed-millions> (date accessed November 19, 2018).

the North Korean defectors who initially enter South Korea end up leaving South Korea to seek asylum in third countries: some have even returned to North Korea.[2] According to another report, as many as 14% of defectors who die each year do so as a result of suicide, a rate three times higher than that of South Koreans.[3]

The prospects for unification remain highly uncertain, but even if North-South relations do improve, it is likely that the flow of defectors will continue. And, of course, if some unexpected event were to occur leading to more rapid unification, the South would face daunting decisions about how—and how many—Northerners could be integrated. What effect would a large inflow of defectors have on the integrity of the political system and social relations? Are there limits on the country's absorptive capacity?

We now have numerous refugee studies covering a variety of features of their entry into South Korean life: they are reviewed in the first section. Yet most either treat North Korean defectors as a homogeneous group or rely on standard demographic variables to understand their behavior: prior employment, age, education and so on. Yet as the number of North Korean defectors increases—with exit experiences that span quite different time frames—their diversity also increases, and not simply along with these standard parameters. Rather, we need to be alert that this population is increasingly characterized by a diversity of fundamental value systems and political outlook as well.

The objective of this study is to identify and validate a representative typology of North Korean defectors that goes beyond simple demographic characteristics to psychographic value systems and associated views of the South Korean political economy. In doing so, we first identify meaningful dimensions of North Korean defectors' value systems. The

2. Young Jae Lee, "North Korean Refugees Leaving South Korea: The Endless Defection," Yonhap News, October 3, 2013, <http://www.yonhapnews.co.kr/politics/2013/10/02/0511000000AKR20131002211800014.HTML> (date accessed January 26, 2018).

3. See, e.g., Stephen Evans, "Korea's hidden problem: Suicidal defectors," *BBC News*, November 5, 2015, < http://www.bbc.com/news/magazine-34710403> (date accessed January 26, 2018).

resulting clusters are then further analyzed to account for differences in their adaptation and life satisfaction after defection, including with respect to the South's democratic capitalist political economy.

II. Background and Theory

The challenges facing North Korean defectors start with the nature of economic, political and social life in the North, extend to the traumas associated with their lives and decision to exit, extend into third country experiences and end with the very different nature of life in the South.[4] First, and most obviously, North Korea is a relatively underdeveloped state socialist system, although with an increasingly substantial private sector.[5] The education system is adequate with respect to basic literacy and numeracy, but is highly ideological in nature. Daily life is highly structured and surveilled,[6] even for those who are engaged in market activity, and the skills demanded in such an economy are both different and lag behind those that are required to live in an advanced capitalist country.

In addition, the defectors themselves represent a highly-selected group, a fundamental challenge to all refugee studies. The decision to leave is taken by only a very small share of the total population and no doubt reflects quite peculiar features of these individuals. Some are simply geographical: there have been higher flows from the Northeast than from other parts of the country because of the proximity to the Chinese border. But other features are harder to observe, for example,

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4. Stephan Haggard and Marcus Noland, *Witness to Transformation: Refugee Insights into North Korea* (Washington D.C.: Peterson Institute for International Economics, 2011).

5. Andrei Lankov, *North of the DMZ: Essays on Daily Life in North Korea* (Jefferson, N.C. McFarland & Company, 2007); James Pearson and Daniel Tudor, *North Korea Confidential: Private Markets, Fashion Trends, Prison Camps, Dissenters and Defectors* (North Clarendon Vermont: Tuttle, 2015).

6. Andrei Lankov, In Ok. Kwak, and Choong Bin Cho, "The Organizational Life: Daily Surveillance and Daily Resistance in North Korea," J*ournal of East Asian Studies*, vol. 12, no. 2 (2012), pp.193-214.

the particular disaffection, propensity for risk-taking or even trauma that might have motivated defectors to exit in the first place.

Once out of the country, defectors are subject to a variety of shocks, including in many cases forced return to North Korea. Those living in China as illegal immigrants are continually under threat and in some cases trafficked and abused. Once in the South, an honest effort is made on the part of South Korean authorities in integrating these individuals. But they are nonetheless "strangers in a strange land," a circumstance that is even more frustrating because of the apparent similarities associated with a shared mother tongue. The adjustments range from navigating a new education system and peer pressures for children, to an economy in which individuals are largely held responsible for themselves to a cultural milieu that can be not only unwelcoming but suspicious and hostile.

We now have a very substantial literature on the North Korean defectors at various stages of their journeys, starting with the exit from North Korea and their living experiences abroad. These works include a growing number of memoirs by defectors themselves,[7] syntheses of their experiences based on open-ended interviews, and more structured analysis.[8] With respect to adaptation in the South, studies have looked at employment,[9] psychological health,[10] adaptation of female and youth

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7. Eunsun Kim, *A Thousand Miles to Freedom: My Escape from North Korea* (New York: St. Martin's Press, 2015).

8. Sandra Fathy, *Marching Through Suffering: Loss and Survival in North Korea* (New York: Columbia University Press, 2015); Stephan Haggard and Marcus Noland, *Witness to Transformation: Refugee Insights into North Korea* (Washington D.C., Peterson Institute for International Economics, 2011)

9. Ho S. Park, "A Study of Problem Concerning the Support on the Settlement of North Refugees to South Korean Society," *The Journal of International Relations* vol. 7, no. 2 (2004), pp.1-24; Han Seung Sun et al., *A Study of Employment of North Refugees and Policy Implications*, Korea Labor Institute, 2005.

10. U Taek Jeon et al., "The Patterns and Formation of National Identity among North Korean Refugees in South Korea: A Grounded Theory Study," *Unification Policy Studies*, vol. 20, no. 2 (2011), pp.1-35; Tae Wan Eom, "A Phenomenological Approach to Traumatic Experiences Among North Korean Defectors," *Korean Journal of Social Welfare*, vol. 61, no. 2 (2007), pp.189-213.

defectors,[11] cultural shock, discrimination, and identity,[12] and support programs and institutions.[13] Some have started to look at defectors' distinctive political views as well.[14] Despite the increasing volume of studies on North Korean defectors, most of the past studies used a simplistic approach. They either treat North Korean defectors as one homogeneous group or use a simple classification of demographic characteristics to examine and understand their behaviors. As the number of North Korean defectors increases, diversity within them also increases. The increasing number of North Korean defectors who experience difficulties in their adaptation to South Korean society is evidence of the increased diversity that exists among them. In this situation, any attempt to understand this diversity by using simple demographic characteristics is not enough to comprehend them fully.

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11. Young A Cho and U Taek Jeon, "A Qualitative Study of North Korea Students' Adaptation to South Korean College Life," *The Korean Journal of Counseling and Psychotherapy*, vol. 16, no. 1 (2004), pp.167-186; Jung A Jung et al., "A Study on Defecting Motive and Social Adaptation of North Korean Defectors in South Korea: Focusing on Moderating Effect of Resilience," *Unification Policy Studies*, vol. 22, no. 2 (2013), pp.215-248; Gung C. Nam and Yea R. Kim, "Moral Economy of Female North Korean Refugees," *Journal of Communication Research*, vol. 53, no. 1 (2016), pp.105-148.

12. Yun Kyung Chung, Hee Jin Kim, and Jee Hyun Choi, "The Relationship between Discrimination and Social Adaptation among North Korean Refugees: Mediating Effects of Self-Support Efficacy," *Social Science Research Review,* vol. 31, no. 2 (2015), pp.157-182; Jung A Jung et al., "A Study on Defecting Motive and Social Adaptation of North Korean Defectors in South Korea: Focusing on Moderating Effect of Resilience," *Unification Policy Studies*, vol. 22, no. 2 (2013), pp.215-248; Seok-Hyang Kim, *A Review of Daily life of North Korean Refugees*, Korea Institute for National Unification, 2012.

13. Hwa Soon Kim and Dae Seok Choi, "Perception and Task of Policies on the Settlement of North Korean Migrants: Going beyond Settlement Support to Social Integration," *Unification Policy Studies*, vol. 20, no. 2 (2011), pp.37-73; Geum Soon Lee et al., *Supporting System for North Korean Refugees by Sector*, Korea Institute for National Unification, 2004; Ho S. Park, "A Study of Problem Concerning the Support on the Settlement of North Refugees to South Korean Society," *The Journal of International Relations,* vol. 7, no. 2 (2004), pp.1-24.

14. Arum Hur, "Adapting to Democracy: Identity and the Political Development of North Korean Defectors," *Journal of East Asian Studies*, vol. 18, no. 1 (2018), pp.97-115.

Our approach differs from these previous studies in assuming—and focusing on—the *heterogeneity* of defectors, particularly *with respect to underlying psychological values and political orientation*. A recurrent error in our views of North Korea is to assume that rigid authoritarian rule is associated with a homogenous, even robot-like population that shares similar outlooks. Yet we know from the defectors themselves that they differ not only along with many basic demographic dimensions from education and employment through lived experiences, but also psychological values including political orientation. North Koreans are no different than humans anywhere in being diverse, and it is this diversity that we want to explore. Values can be defined as the whole constellation of a person's attitudes, beliefs, opinions, hopes, fears, prejudices, needs, desires, and aspirations.[15] Taken together, they govern how one behaves. Therefore, a study focusing on the value orientation aspect would not only improve our understanding of North Korean defectors but also help us derive useful implications for government policies to deal with them. To do this, we focus on relevant value orientations of North Korean defectors, using those both to categorize the defectors and to test for their effects on the adjustment process.

III. Constructs and Survey Method

1. Dimensions of Value Systems

To measure relevant dimensions of value systems, we turned to past literature on political psychology,[16] lifestyle and values' studies[17] and relevant studies that sought to scale such concepts making

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15. Arnold Michell, *The Nine American Lifestyles* (New York: Macmillan, 1984)

16. Jost Stellmacher and Thomas Petrzel, "Authoritarianism as a Group Phenomenon," *Political Psychology*, vol. 26, no. 2 (2005), pp.245-274.

17. Ah Keng Kau, Kwon Jung, Siok Kuan Tambyah, and Soo Jiuan Tan, *Understanding Singaporeans: Values, Lifestyles, Aspirations and Consumption Behaviors* (Singapore: World Scientific Publishing Company, 2004)

necessary additions and modifications based on the peculiarities of a defector population.[18] Given our presumption that broader national and social values were likely to matter given the nature of the North Korean political economy, we sought to tap measures of values at the national or ideological level as well as at the society and individual level. A total of 36 survey items were used based on eight concepts, each of which captured values at one of our three organizing levels of analysis:

- National level: orientation toward the political and economic system (six items).
- Society level: communal value orientation (four items) and family value orientation (three items).
- Individual level: traditional value orientation (four items), entrepreneurial orientation (five items), and materialistic inclination (five items)—Simply measuring and clustering these values constitutes the first step in the analysis. But these values were then conceived as independent variables that help explain individual adaptation at a broadly parallel number of levels.
- Macro Level: adaptation to—and acceptance of—democracy and a market-oriented economic system (three items).
- Mezzo or Society Level: adaptation in terms of language, value system, and overcoming social prejudice (three items).
- Micro or Individual Level: personal feelings such as happiness and confidence with respect to South Korean society (three items).

North Korean defectors' satisfaction is measured in terms of their satisfaction with respect to current income, employment, consumption, cultural & leisure activities, health, participation in social activities, housing, and overall satisfaction. These aspects are identified from the

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18. Ronald. E. Goldsmith and Charles F. Hofacker, "Measuring Consumer Innovativeness," *Journal of Academy of Marketing Science*, vol. 19 (Summer 1991), pp.209-221; Marsha L Richins, "Special Possessions and the Expression of Material Values," *Journal of Consumer Research*, vol. 21 (December 1994), pp.522-53.

annual Social Survey by the Korean Statistics Department.[19]

A total of 1,010 North Korean defectors were surveyed, excluding those younger than 20 years of age. We also focused on defectors who left North Korea from 2003. This timeline is used to select defectors who experienced the first experiment with economic reform by the North Korean government in July 2002 that provided some experience with a market economy. Respondents were identified using snowball sampling methods due to the special nature of the target population. A professional research company, Nielsen Korea, collected the data with a face-to-face interview method and all value, lifestyle, adaptation, and life satisfaction items are measured using a standard five-point Likert type scale. Data was collected during June and July of 2016.

2. Finding Types: Factor, Cluster, and Discriminant Analysis of Values

Since the goal of this study is to construct a meaningful typology of North Korean defectors' worldviews and values, the first step was to undertake an explanatory factor analysis on value measures. This step permits us to identify underlying dimensions of North Korean defectors' value systems and to assure that the postulated dimensions are in fact adequately independent to provide the basis for later analysis and inference. The second step was to undertake a cluster analysis to identify meaningful groupings using the factor scores identified in the explanatory factor analysis. Finally, discriminant analysis was conducted to validate differences among the clusters in terms of key demographic and other psychographic variables. In the subsequent section, we turn to the differences that these value clusters might generate in terms of adaptation and life satisfaction.

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19. Korean National Statistics Office (2016), *The Summary Result of 2016 Social Survey: Family, Education, Health, Safety, and Environment*, Statistics Korea, 2016, <http://kostat.go.kr/portal/korea/kor_nw/2/1/index. board?bmode=read&aSeq=357457> (date accessed January 26, 2018); Korean National Statistics Office, *The Summary Result of 2017 Social Survey: Welfare, Social Participation, Culture & Leisure, Income & Consumption, and Labor*, Statistics Korea, 2017, <http://kostat.go.kr/portal/korea/kor_nw/2/1/index. board?bmode=read&aSeq=364361> (date accessed January 26, 2018).

The exploratory factor analysis was performed on the 31 items that measure the various dimensions of values identified above. The Bartlett test of sphericity ($\chi2$=8154.40, p<0.00) and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (0.87) provide sufficient justification for using factor analysis on the data set.[20] The final number of factors is ideally determined after considering the latent root criterion, the scree plot test, and the interpretability of factor solutions. Based on the latent root criterion, six factors were identified as having an eigen value greater than one and the scree plot identifies an elbow point at which the curve first begins to straighten out around the 6th factor. We then compared the interpretability of five, six and seven factor solutions by examining items that are highly loaded to each factor.

Consistent with the initial conceptualization, the results did, in fact, show that the six-factor solution provided the most coherent interpretability among the three possible solutions considered and it was thus selected as the final factor solution. In the process, four items were excluded from the analysis due either to their low or high loadings on several factors. Thus, 27 items were ultimately used to obtain the final six-factor solution of types, using principal component analysis with varimax rotation. The six factors explain 58.2% of the variance. The rotated factor matrix is examined to interpret and name the factors. Since the sample size is sufficiently large (i.e., greater than 350), factor loadings greater than 0.30 are used to identify significant loadings.[21] The items loaded on each factor and their loadings are summarized in Table 1. Based on the examination of the factor loadings of each variable, the six factors were identified as capturing the following value orientations:

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20. Kaiser suggested the following guideline for interpreting KMO: 0.90 or above is marvelous, 0.80 is meritorious, 0.70 is middling, 0.60 is mediocre, 0.50 is miserable, and below 0.50 is unacceptable. Quoted from Henry. F. Kaiser, "An Index of Factorial Simplicity," *Psychometrika*, vol. 39 (1974), pp.31-36.

21. Joseph F. Hair, William C. Black, Barry J. Babin, and Rolph E. Anderson, *Multivariate Data Analysis*, 7th edition, Engelwood Cliffs (NJ: Prentice Hall, 2009)

<Table 1> Six Value Dimensions of North Korean Defectors: Related Survey Items and Factor Loadings

Items	Factor Loadings
Factor 1: Group Authoritarianism (14.8%, Alpha=.86)	
1. A member of a nation should always obey that nation's rules (Conventionalism)	.804
2. A member of a nation who has counteracted that nation's norms should always be called to account (Aggression)	.765
3. A member of a nation who has violated that nation's rules should be punished severely (Aggression)	.756
4. A member of a nation should do nothing that contradicts that nation's norms or rules (Conventionalism)	.697
5. A member of a nation has to respect and obey that nation's leader in any case (Submission)	.696
6. The instructions of nation's leader should be obeyed under all circumstances (Submission)	.648
Factor 2: Entrepreneurial Spirit Orientation (9.9%, Alpha=.74)	
1. I like stimulation and changes (Stimulation)	.751
2. I often try new products before my friends do (Try new)	.744
3. I don't mind taking high risks if the chances of success are good (Risk-taking)	.658
4. I am creative in solving problems (Creative)	.554
5. If I spot an opportunity, I usually act on it (Opportunity)	.508
Factor 3: Traditional Value Orientation (8.8%, Alpha=.68)	
1. Divorce is unacceptable (Moral: divorce)	.749
2. It's wrong to have sex before marriage (Moral: pre-marital sex).	.697
3. I like to stick to traditional ways of doing things in most of my life (Traditional method)	.603
Factor 4: Family Value Orientation (8.7%, Alpha=.70)	
1. One should strive to provide the best for one's children (Support)	.730
2. Family members should be prepared to make sacrifices to help each other (Sacrifice)	.714
3. One should support one's parents in their old age (Support)	.695
4. Family members should cherish one another and show mutual love (Mutual love)	.536
Factor 5: Communal Value Orientation (8.4%, Alpha=.68)	
1. I am willing to do volunteer work if there is an opportunity (Volunteering)	.731
2. I am willing to pay more for products that are friendly to the environment (Environment)	.701
3. I often donate money to charitable causes (Donation)	.631
Factor 6: Materialistic Inclination (7.6%, Alpha=.56)	
1. Being rich is one of the most important objectives in my life (Acquire wealth)	.805
2. I like to own things that impress people (Impress)	.733
3. Money can solve most people's problems (Money is everything)	.538
4. If possible, I want to live a simple life without owning too many things (Simple life)	-.401

- **Factor 1: Authoritarianism**: This factor had six loaded items and explained 14.8% of the variance. We adopted the label "Authoritarianism" because most of the highly loaded items were related to conventionalism, aggression, and submission to an authoritative political order or leader.
- **Factor 2: Entrepreneurialism**: This factor had five loaded items and explained 9.9% of the variance. Most of the highly loaded items are related to characteristics associated with entrepreneurial activity, such as willingness to take risks and preference for change and new things. It also captured a tendency for opportunism and creativity.
- **Factor 3: Traditional Value Orientation**: This factor had three loaded items and explained 8.8% of the variance. The loaded items represented conservative moral perceptions on marriage, pre-marital sex, and the value of maintaining traditional ways of doing things.
- **Factor 4: Family Value Orientation**: This factor had four loaded items and explained 8.7% of the variance. The loaded items represent core family values in terms of support, sacrifice, and mutual love of family.
- **Factor 5: Communal Value Orientation**: This factor had three loaded items and explained 8.4% of the variance. The loaded items represent people's willingness to contribute to society through donations, volunteering, and an interest in environmental protection.
- **Factor 6: Materialism**: This factor had four loaded items and explained 7.6% of the variance. It was labeled materialism as most of the loaded items captured interest in money, wealth, and status.

Once we identified these six value dimensions, the next step was to consider how they combine to generate different types of defectors: those with worldviews that were similar within the group but distinctive across groups. This was done through a cluster analysis using the factor scores of the identified six value orientations.

Although cluster analysis is a sophisticated statistical technique, there is no clear standard for deciding the appropriate number of clusters, which will depend in part on the purpose of the study. We

followed the procedure recommended by Punj and Stewart (1983),[22] which endorsed a validation approach suggested by McIntyre and Blashfield (1980) to determine the appropriate number of clusters. The procedure involves dividing the sample into halves and carrying out cluster analysis on each half. The first half is used as a test sample, and the second half is used as an internal validation sample. The test sample is utilized to generate the possible alternative cluster solutions, and the internal validation sample is then used to select the best solution based on the stability and reproducibility of cluster membership in the test sample. After the elimination of a small number of respondents,[23] the remaining 999 cases were randomly divided into two data sets, D1 and D2, containing 502 and 497 cases respectively. D1 was used as a test sample and D2 as a validation sample.

The next step is to obtain an initial idea of the number of plausible clusters, which was done through hierarchical cluster analysis using Ward's method and Euclidean distances. The changes in agglomeration coefficients, which represent increases in the within-cluster variance for each step of combining clusters, were examined to identify initial alternative cluster solutions. A big change in the agglomeration coefficient is an indicator that two heterogeneous clusters are being combined and such a jump in the agglomeration coefficient can be observed in the five to eight-cluster solution range. Therefore, four to nine clusters were considered as alternative cluster solutions.

The test sample (D1) was then analyzed using a hierarchical clustering method for the alternative number of clusters (i.e., n=4, 5, 6, 7, 8, and 9), the cluster centers for each cluster were calculated and the

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22. Robert. M. McIntyre and Roger. K. Blashfield, "A Nearest-Centroid Technique for Evaluating the Minimum-Variance Clustering Procedure," *Multivariate Behavioral Research*, vol. 2 (April, 1980), pp.225-238; Girish Punj and David. W. Stewart, "Cluster Analysis in Marketing Research: Review and Suggestions for Application," *Journal of Marketing Research*, vol. 20 (May, 1983), pp.134-148.

23. Since cluster solutions are very sensitive to outliers, potential outliers were identified prior to the cluster analysis. For each factor, we identified respondents whose factor scores were higher than 3 or lower than -3. Since factor scores are standardized, the probability of occurrence of those values is less than 99.9% and as a result 11 respondents were eliminated as outliers.

cross-validation procedure utilizing constrained and unconstrained solutions for each alternative number of clusters was performed on the validation sample (D2).[24] The chance corrected coefficient of agreement, kappa, is computed using two solutions of D2 for each of the six alternatives. The kappa value for 4, 5, 6, 7, 8, and 9 cluster solutions are 0.38, 0.46, 0.46, 0.43, 0.44, and 0.39, respectively. Considering the kappa values, the interpretability of clusters, and the preference for fewer rather than more clusters ceteris paribus, the five-cluster solution was selected as the optimal solution. The cluster centers of each factor are presented in Table 2, and a graphical representation of the cluster is presented in Figure 1.
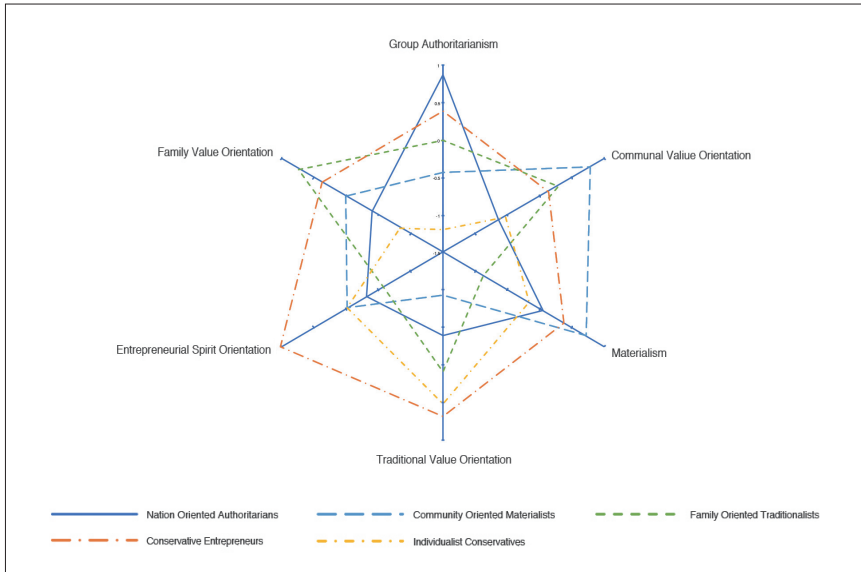
<Table 2> Difference in Value Orientation (Cluster Centroids) among North Korean Defector Clusters

Clusters/ Value Dimension	Nation- oriented Authoritarians	Community- oriented Materialists	Family- oriented Traditionalists	Conservative Entrepreneurs	Individualist Conservatives
Group Authoritarianism	**.88**	-.43	-.01	.38	*-1.20*
Communal Value Orientation	*-.64*	**.78**	.28	.13	-.54
Family Value Orientation	-.41	.00	**.73**	.37	*-.84*
Traditional Value Orientation	-.39	*-.93*	.10	**.68**	.53
Entrepreneurial Spirit Orientation	-.32	-.02	*-.57*	**1.01**	-.02
Materialistic Inclination	.04	**.72**	*-.87*	.38	-.17
Number of Cases	226	181	222	210	160
% of Respondents	22.6	18.1	22.2	21.0	16.0

Note: The highest values for each factor are in bold and underlined and the second highest values are underlined. The lowest values for each factor are in bold and italic, and the second highest values are in italic.

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24. For each given number of clusters, the constrained solution classifies cases in D2 using K-means method with the cluster centers of the test sample, whereas the unconstrained solution generates clusters using a hierarchical clustering method without any restrictions. The cluster solution that has the closest agreement between the constrained and the unconstrained solutions of D2 is selected as the final solution.

<Figure 1> Differences in Value Orientation among North Korean Defector Clusters

Discriminant Analysis

To validate the identified clusters, a discriminant analysis was conducted to examine whether they could be differentiated by demographic and other psychographic variables. Three groups of demographic variables were examined: basic demographics (age, gender, and marital status), those related to life in North Korea (education, perceived income level, and communist party membership), and those related to life in South Korea (time in South Korea, perceived income level and employment status). All the categorical demographic variables were dummy-coded before they were used in the discriminant analysis. As psychographic variables, nine terminal values developed by Kahle (1983) were also examined.

The univariate tests for the equality of group means for demographic and psychographic variables are all significant except education in North Korea and employment in South Korea, suggesting that the identified

five clusters are in fact different in terms of key demographic and other psychographic aspects.[25] A stepwise discriminant analysis procedure further identified variables that have significant discriminating power. Five demographic variables (age, gender, lower-income status in North Korea, lower-middle-class status in South Korea, and time in South Korea) and four List of Value (LOV) variables (i.e., warm relationship with others, sense of belonging, self-respect, and being well-respected) were retained in the discriminant functions, suggesting that they were significant variables in discriminating the clusters.

3. Characterization and Description of the Clusters

A key challenge of cluster analysis is to characterize the clusters. We found that value orientations of the identified clusters did to a significant degree align well along the three basic social levels (i.e., nation, community, and family). The five clusters can thus be broadly characterized by those who were nation-oriented, community-oriented, family-oriented, balanced among the three, or displayed no strong identification with any of these orientations. Yet the clusters are also distinctive on the remaining three personal level value orientations. Based on the cluster centers of the five-factor scores presented in Table 2 and Figure 1, the clusters are labeled as (1) nation-oriented authoritarians, (2) community-oriented materialists, (3) family-oriented traditionalists, (4) conservative entrepreneurs, and (5) individualist conservatives. The demographic and psychographic make-up of the cluster is shown in Tables 3 and 4.

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25. The overall hit ratio of discriminant functions was 42.8%. This hit ratio exceeds the proportional chance criterion (20.3%) by more than the required 25% cut-off (i.e., exceeded 25.4%) suggested by Hair et al. (2009), allowing predictive validity of the discriminant function and thereby further legitimizing conclusions based on the univariate test results.

- **Nation-oriented authoritarians** (22.6% of respondents). This cluster has the highest orientation toward the nation but also on authoritarianism. By contrast, they score low on communal (lowest) and family values (second lowest). In terms of individual-level value orientation, they are low on both entrepreneurial orientation (second lowest) and with respect to traditional values (second lowest) with an average orientation toward materialism. This means that they are not exactly conservative with respect to traditional values, yet they are not entrepreneurial either. Demographically, this group has relatively more females (88.1% compared to the average of 79.3%) and is one of the older groups (average age of 45.4 years old) with the biggest share in their 40s (42.5%). Their time living in South Korea is relatively longer than other groups (average living period of 7.6 years), with 34.5% of them living in South Korea for more than 10 years. Despite their relatively longer living period in South Korea, their perceived income level in South Korea is low (76.5% of them think that their income is at the lower-class level compared to the average of 68.0%).
- **Community-oriented materialists** (18.1%). This group scored high on community value orientation (highest), but was neutral on family and relatively low on nation value orientation. These respondents were also the most materialistic (highest), with about average scores on entrepreneurship but low on traditional values (lowest). Demographically, this group is younger than other groups (average age of 35.5 years old) with the largest share in their 20s (30.4%) and 30s (34.3%) with a relatively shorter time in South Korea (6.4 years).
- **Family-oriented traditionalists** (22.2%). As the name suggests, these respondents were most oriented toward family with moderate to neutral orientations toward nation and community. Demographically, this group was not distinctive, but it did have the highest percentage actually living with family in South Korea (75.7%). In terms of individual-level value orientation, they are the least materialistic and entrepreneurial (lowest) and somewhat more traditional value oriented, which seems consistent with a family orientation.
- **Conservative entrepreneurs** (21%). This group showed a balanced orientation on nation, community, and family but was the group with

the highest orientation toward both entrepreneurial and traditional values and the second-highest orientation toward materialism: they also consistently scored higher than all other groups on terminal values. Demographically, this group has slightly more male (27.1 % compared to the average of 20.7%) and had the highest proportion of former communist party members (14.8%).

- **Individualist conservatives** (16%). This group scored relatively low on all three levels of social orientation: nation (lowest), communal (second lowest) and family values (lowest): thus we labeled them individualists. Yet surprisingly, they scored somewhat lower than average on materialism and somewhat higher on traditional value orientation (second highest). Interestingly, this group appears to be upwardly mobile. The group's perceived income level in North Korea was lower than other groups (the proportion of the lower-income category was 54.4 % compared to the average of 43.8%), but its perceived income level in South Korea is better than the others with the lowest proportion of the lower-class category (58.1%) and the highest proportion of the lower-middle-class category (31.9%).

<Table 3> Demographic Characteristics across North Korean Defector Clusters

	Total	Nation-oriented Authoritarians	Community-oriented Materialists	Family-oriented Traditionalists	Conservative Entrepreneurs	Individualist Conservatives
Number of cases	999	226	181	222	210	160
Gender						
Male	20.7	*11.9*	22.7	19.8	**27.1**	23.8
Female	79.3	**88.1**	77.3	80.2	*72.9*	76.3
Age						
20s	17.4	*6.2*	**30.4**	15.3	15.7	23.8
30s	23.6	21.7	**34.3**	18.9	21.9	23.1
40s	33.3	**42.5**	27.1	36.0	31.0	*26.9*
50s	17.4	19.9	7.7	19.4	19.0	**20.0**
60+	8.2	9.7	0.6	10.4	**12.4**	6.3
Ave. age (F=21.41, p<.00)	42.4	*45.5*^c	*35.5*^a	44.2^c	44.0^c	41.2^b
Education at (in) North Korea						
No education	1.3	1.5	*.0*	2.0	1.1	**2.0**
Elementary	5.3	*2.5*	4.4	**6.9**	6.4	6.5
Middle	3.7	*2.0*	3.8	3.5	4.3	**5.2**
High	74.0	75.0	76.1	72.3	*70.6*	**77.1**
College +	15.6	**19.0**	15.7	15.3	17.6	*9.2*
Income at (in) North Korea						
Lower	43.8	46.9	*28.2*	47.7	41.9	**54.4**
Middle Lower	19.6	**22.6**	22.1	*15.3*	19.5	18.8
Middle Middle	26.4	21.2	**36.5**	29.3	26.2	*18.8*
Middle Upper	8.1	8.0	**11.0**	*6.3*	8.6	6.9
Upper	2.0	1.3	2.2	1.4	**3.8**	*1.3*
Communist Party Member						
Yes	10.2	11.5	*6.1*	9.9	**14.8**	7.5
No	89.8	88.5	**93.9**	90.1	*85.2*	92.5
Living Period in South Korea						
1~5 years	28.3	*20.8*	28.7	25.7	**38.6**	28.7
6~10 years	44.3	44.7	**49.7**	45.9	*37.1*	45.0
10+ years	27.3	**34.5**	*21.5*	28.4	24.3	26.3
Avg. period (F=4.49, p<.01)	6.8	**7.6**^b	6.4^a	7.0a^b	*6.4*^a	6.6^a
Family in South Korea						
Yes	70.0	*65.0*	74.0	**75.7**	65.7	70.0
No	30.0	**35.0**	26.0	*24.3*	34.3	30.0
Income in South Korea						
Lower	68.0	**76.5**	64.6	64.0	73.3	*58.1*
Middle Lower	21.8	*17.3*	22.7	23.9	16.2	**31.9**
Middle Middle	7.5	*4.4*	**9.9**	9.0	8.6	5.6
Middle Upper	1.4	**1.8**	1.7	1.4	*1.0*	1.3
Upper	1.3	*0.0*	1.1	1.8	1.0	**3.1**
Job in South Korea						
Yes	32.9	**35.8**	34.8	31.5	*30.0*	32.5
No	67.1	*64.2*	65.2	68.5	**70.0**	67.5

Note: The highest values for each factor are in bold and underlined, and the lowest are in bold and italic.
a,b,c,d: Means with different alphabets are significantly different (*p*<.05) based on post-hoc Duncan contrasts analysis.

<Table 4> Differences in Aspiration Level across North Korean Defector Clusters[1]

	Total	Nation-oriented Authoritarians	Community-oriented Materialists	Family-oriented-Traditionalists	Conservative Entrepreneurs	Individualist Conservatives	F
Number of cases	999	226	181	222	210	160	
Important Values in Life[2]							
Self-respect	4.54	4.44(1)^b	4.62(1)^c	4.45(2)^b	**4.63**(1)^c	4.07(1) ^{a}	18.23 **
Warm relationship with others	4.27	4.23(2)^b	4.33(4)^{bc}	4.46(1)^{cd}	**4.49**(3)^d	3.74(6)^a	31.14 **
Security	4.27	4.15(3)^b	4.38(2)^{cd}	4.30(3)^{bc}	**4.50**(2)^d	3.94(2)^a	11.72 **
Sense of accomplishment	4.21	4.12(4)^b	4.38(2)^{cd}	4.23(4)^{bc}	**4.40**(4)^d	3.87(3)^a	13.08 **
Fun & Enjoyment	4.12	3.98(5)^a	4.23(5)^b	4.16(5)^b	**4.30**(7)^b	3.86(4)^a	9.70 **
Self-fulfillment	4.03	3.82(6)^a	4.17(6)^b	4.06(6)^b	**4.34**(6)^c	3.71(7)^a	18.66 **
Being well-respected	3.97	3.77(7)^a	4.01(7)^b	3.93(7)^{ab}	**4.35**(5)^c	3.76(5)^a	16.99 **
Excitement	3.88	3.70(8)^a	3.87(8)^a	3.85(8)^a	**4.26**(8)^b	3.70(8)^a	13.84 **
Sense of belonging	3.68	3.39(9)^a	3.54(9)^a	3.81(9)^b	**4.08**(9)^c	3.57(9)^a	15.78 **

*: $p<.05$, **: $p<.01$

a,b,c,d: Means with different alphabets are significantly different ($p<.05$) based on post-hoc Duncan contrasts analysis.

[1] The highest values for each aspect of aspiration are in bold and underlined, and the lowest are in bold and italic.

[2] Every item was measured with a 5-point scale (1 = Not important at all, 5 = Very important). Numbers in parenthesis represent the ranking of the value within each cluster.

4. Political Views, Adaptation and Life Satisfaction Across Clusters

Do the clusters we have identified provide any insight into the propensity for adaptation and life satisfaction after defection, including with respect to the South's democratic capitalist political economy? Table 5 reports responses to a series of statements measuring adjustment experiences, grouped by the three levels of social interaction —macro, mezzo, and micro—and by the five clusters.

Overall, North Korean defectors arguably adapt relatively well at the macro level: with respect to support of democracy (M=3.63) and a capitalist, market-oriented economy (M=3.70 for support and M=3.86 for understanding). They also adapt relatively well at the micro-level as measured by happiness (M=3.70), confidence (M=3.75) and liking South Korea (M=3.83). However, they seem to find more difficulties in adapting at the social level due to different value systems (M=3.16) and different language styles (M=3.05). The defectors report particular difficulties due to prejudice (M=2.41).

The five clusters, however, also show different patterns in their adaptation to the South Korean political, economic and social system. The conservative entrepreneurs consistently score higher on measures of adaptation to and acceptance of a democratic capitalist system. This may not be surprising with respect to the economy, but it is noteworthy that they also exhibit the most positive reception of democracy as well. However, they face more difficulties at the mezzo level in adjusting to the different language and value system and experiencing more prejudice.

The individualist conservatives show the opposite pattern. Their adaptation at the macro and micro levels are lower than the other groups, but their mezzo level adaptation is not. Particularly noteworthy is that this group shows the weakest acceptance of South Korea's capitalist economic system. Nonetheless, they also report less prejudice than the other groups (F=7.56, p<.01), perhaps because of lower expectations.

Although the adaptation level of the remaining three groups lies between these two in general, they show some unique response patterns. A particularly important finding is that the nation-oriented authoritarians who hold a strong authoritarian ideology showed a lower level of support for a democratic system (F=4.20, p<.01).

The community-oriented materialists are particularly interesting because they show a higher level of adaptation on different value systems (F=4.72, p<.01) and language style (F=16.56, p<.01), but not on prejudice. This finding suggests that prejudice by South Koreans is a serious obstacle found even among those who exhibit a strong community orientation and overall capacity to adapt.

\<Table 5\> Differences in Adaptation Level across North Korean Defector Clusters[1]

	Total	Nation-oriented Authoritarians	Community-oriented Materialists	Family-oriented Traditionalists	Conservative Entrepreneurs	Individualist Conservatives	F
Number of cases	999	226	181	222	210	160	
Adaptation to South Korea[2]							
Macro Level:							
I have become more *supportive of democracy* now than when I first came to South Korea	3.63	*3.46*[a]	3.64[ab]	3.73[b]	**3.77**[b]	3.53[a]	4.20 **
I *understand the market economy system* better than when I first came to South Korea	3.86	3.81[b]	3.87[b]	3.89[b]	**4.08**[c]	*3.61*[a]	8.22 **
I have become more *supportive of the market economy system* than when I first came to South Korea	3.70	3.63[b]	3.67[b]	3.70[b]	**4.03**[c]	*3.41*[a]	13.67 **
Mezzo Level:							
I am *confused by the value system* of South Korea after my defection [3]	3.16	3.15[ab]	**3.37**[c]	3.24[bc]	*2.96*[a]	3.11[ab]	4.72 **
I have d*ifficulty in understanding the South Korean language style* [3]	3.05	2.92[b]	**3.48**[c]	3.14[b]	*2.68*[a]	3.14[b]	16.56 **
South Koreans have *negative prejudice towards North Korean defectors* [3]	2.41	2.34[ab]	2.29[ab]	*2.47*[b]	2.27[a]	**2.73**[c]	7.56 **
Micro Level:							
I *like South Korea more* now than when I first came to South Korea	3.83	3.83[bc]	3.66[b]	3.88[c]	**4.18**[d]	*3.47*[a]	17.14 **
I have *become more confident* since I came to South Korea	3.75	3.66[b]	3.65[b]	3.77[b]	**4.14**[c]	*3.45*[a]	17.08 **
I am *happier now than* when I first came to South Korea	3.70	3.66[ab]	3.62[ab]	3.77[bc]	**3.91**[c]	*3.49*[a]	5.43 **

*: $p<.05$, **: $p<.01$

a,b,c,d: Means with different alphabets are significantly different ($p<.05$) based on post-hoc Duncan contrasts analysis.

[1] The highest values for each aspect of aspiration are in bold and underlined, and the lowest are in bold and italic.

[2] Every item was measured with a 5-point scale (1 = Strongly disagree, 5 = Strongly agree).

[3] Revers coded to represent high number means (and) higher level of adaptation.

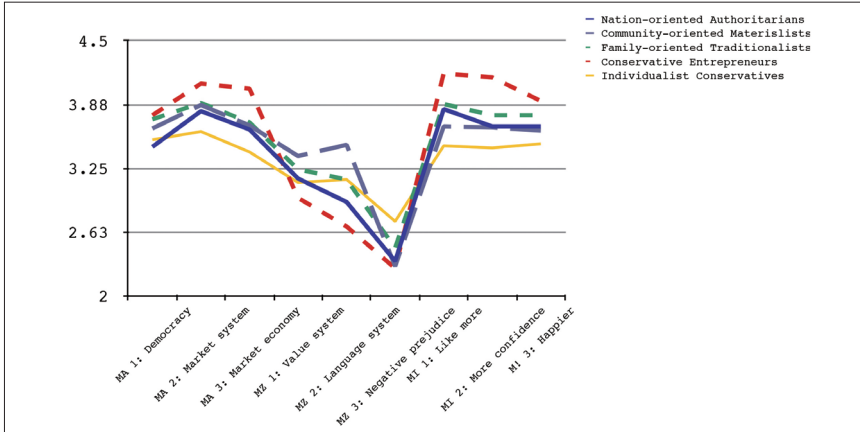**<Figure 2> Difference in Adaptation Level by North Korean Defector Clusters**

Table 6 shows the response of the five clusters to questions on life satisfaction. Although the level of overall satisfaction is not higher than we expected (M=3.23 and only 32.4% "satisfied"), the level is comparable with that of South Koreans (29.7%, Statistics Korea 2017b). The satisfaction level is even lower when it comes to specific categories of life satisfaction. Except for housing, the satisfaction level is significantly lower than the level of overall satisfaction in all other specific life satisfaction aspects.

The five clusters reveal differences in their levels of personal satisfaction. Although the pattern of overall life satisfaction is similar to the result of adaptation levels (i.e., the highest level for the conservative entrepreneurs, the lowest level for the individualist conservatives), overall satisfaction levels of both the nation-oriented authoritarians and the individualist conservative are significantly lower than that of the other groups (F=5.83, p<.01). Again, the lower level of overall life satisfaction of the nation-oriented authoritarians is particularly interesting and can be explained by their lowest level of satisfaction in most of the specific categories of life including health. On the other hand, the low level of individualist conservatives might be attributed to their lower level of adaptation to South Korean society, together with a relatively lower level of satisfaction in most of the specific aspects of life.

<Table 6> Differences in Life Satisfaction Level across North Korean Defector Clusters[1]

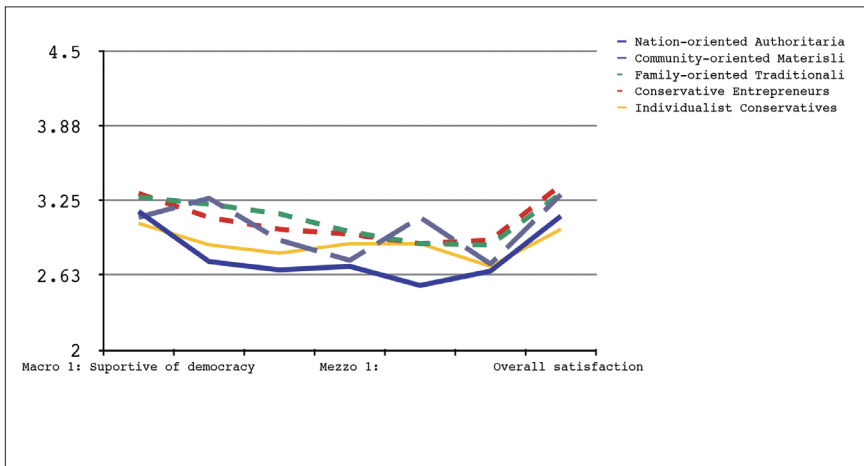|	Total	Nation-oriented Authoritarians	Community-oriented Materialists	Family-oriented-Traditionalists	Conservative Entrepreneurs	Individualist Conservatives	F
Number of Cases	999	226	181	222	210	160	
Life Satisfaction in South Korea[2]							
Housing	3.20	3.16^{ab}	3.11^{ab}	3.28^b	**<u>3.31</u>**^{b}	*3.06*^{a}	2.56 *
Participation in Social Activities (e.g., org. membership, volunteering, etc.)	3.04	*2.74*^{a}	**<u>3.27</u>**^{b}	3.22^b	3.11^b	2.88^a	15.79 **
Cultural & Leisure Activities	2.92	*2.67*^{a}	2.92^{bc}	**<u>3.14</u>**^{d}	3.01^{cd}	2.81^{ab}	8.27 **
Consumption Life	2.86	*2.70*^{a}	2.75^{ab}	**<u>2.99</u>**^{c}	2.97^c	2.89^{bc}	4.83 **
Health Condition	2.85	*2.54*^{a}	**<u>3.11</u>**^{b}	2.89^b	2.89^b	2.89^b	8.01 **
Income	2.78	*2.66*^{a}	2.72^{ab}	2.88^{bc}	**<u>2.92</u>**^{c}	2.70^{ab}	3.13 *
Overall Life Satisfaction	3.23	3.12^a	3.30^b	3.31^b	**<u>3.38</u>**^{b}	*3.01*^{a}	5.83 **

*: $p<.05$, **: $p<.01$

a,b,c,d: Means with different alphabets are significantly different ($p<.05$) based on post-hoc Duncan contrasts analysis.

[1] The highest values for each aspect of aspiration are in bold and underlined, and the lowest are in bold and italic.

[2] Every item was measured with a 5-point scale (1 = Very unsatisfied, 5 = Very satisfied).

<Figure 3> Difference in Satisfaction Level by North Korean Defector Clusters

Overall, our analysis of the five clusters in terms of their adaptation to South Korea's political and economic system and overall life satisfaction after defection shows that significant differences do exist among the value types. These differences in adaptation and life satisfaction are consistent with the traits and attitudes of the respective clusters and provide support for the labels given to these clusters.

IV. Discussions and Conclusions

We identify five major clusters of North Korean defectors based on their value systems. In the process, we find several interesting results that require further discussion. The most important finding is the simple fact that North Korean defectors are surprisingly heterogeneous in their underlying value orientations, including in their political outlook. Although there have been many studies on North Korean defectors, research that goes beyond the simple classification of demographics is relatively new. Public policies need to be attentive to this diversity and the fact that different groups of defectors face somewhat different challenges in adjusting to their life in the South. The findings of this study can thus help policymakers develop more targeted policies and to avoid a one-size-fits-all approach that fails to recognize the diversity among North Korean defectors. Any future policies toward North Korean defectors should consider the heterogeneity in its planning stage and prepare various positions within the policy. In other words, policymakers should consider the heterogeneity among North Korean defectors in the planning stages, so that policies should include as many options as possible to deal with the diversity among policy recipients, that is, a more 'customized policy' or 'social service' for North Korean defectors, which ultimately help them adjust more smoothly to South Korean society.

We can reiterate our more specific findings by underlining patterns of adaptation at the macro, mezzo, and micro levels. It is often thought that North Korean defectors are motivated by political objectives. However, it is important to underscore that there is a group of North

Korean defectors—the nation-oriented authoritarians—that show skepticism with respect to both democracy and the market economy.[26] The implications of this finding are potentially profound: a significant group of defectors with anti-system views may run risks for the political system as a whole, for example, in the potential for populism or even anti-system appeals.

Second, it is clear that the most difficult aspect of North Korean defectors' adaptation to South Korean life lies at the social level, especially in the prejudice shown by fellow South Koreans. Moreover, although some groups showed slightly more resilience, these problems were apparent across the board. Recognizing the importance of the integration between North and South Koreans, the South Korean government announced a policy change for North Korean defectors in 2016, shifting from a policy focused on the settlement to an integrationist approach that emphasizes communication and involvement with South Koreans.[27]

Finally, we see differences in adaptation at the individual level as well. The conservative entrepreneurs showed the highest level of adaptation whereas the individualist conservatives showed the lowest level of adaptation at the individual level. The success of the conservative entrepreneurs could be attributable to their balanced orientation among nation, community, and family. Their balanced view might help them adjust to the vast differences between the two Korean societies and could be used in developing adaptation guidelines for other groups. On the other hand, special care has to be paid to the individualistic conservatives. To our surprise, they proved the most vulnerable group by having a solitary mentality and the lowest level of

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26. See Arum Hur, "Adapting to Democracy: Identity and the Political Development of North Korean Defectors," *Journal of East Asian Studies*, vol. 18, no. 1 (2018), pp.97-115.

27. Ministry of Unification, *Press Release: Embracing North Korean Defectors as Friendly Neighbors to Make Unification Together (in Korean)*, Ministry of Unification, 2016, <http://www.unikorea.go.kr/unikorea/news/release/?boardId=bbs_000000 0000000004&mode=view&cntId=47020&category=&pageIdx> (date accessed February 20, 2018).

aspiration and self-confidence. As a result, they show the lowest level of adaptation in their South Korean life. Special efforts should be given to help them improve their self-respect and confidence first before we encourage them to build a balanced view for better adaptation to their life in the South.

This study seeks to advance the study of North Korean defectors by showing not only their demographic diversity but the variance in terms of values, including but not limited to political ones. Looking forward, there is a need for more longitudinal work. People's value systems and the resulting behaviors do change as time passes. It will help us understand how North Korean defectors evolve from one type to another over time. Despite these limitations, the findings of this study provide meaningful insights not only for South Korean policymakers but also for policymakers in transitional economies or in other countries that have to deal with defectors from authoritarian regimes.

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